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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/500,357

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Bing Zhao

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EXAMINER

HERRING, BRENT W

ART UNIT

PAPER NUMBER

3633

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/500,357	<b>Applicant(s)</b> ZHAO, BING	
	<b>Examiner</b> BRENT W. HERRING	<b>Art Unit</b> 3633	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 January 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 21-46 and 48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 21-46 and 48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 March 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                    | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)         | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/5/2010 has been entered.

### ***Claim Objections***

2. Claims 32, 42 and 47 are objected to because of the following informalities: proper names including, but not limited to Yixue, Taiji, and Gua should not be used in the claims. Their definitions are not commonly known to a person of ordinary skill in the art and a proper definition is not provided in the specification. Appropriate correction is required.

3. Although applicant claims that a person of ordinary skill in the art in Chinese culture would have common knowledge of the expressions, this does not apply to the ordinary skill in the art of the building trades in the United States of America. Wherein the patent is being applied for in the United States, the language of the claims should be understandable to a person of ordinary skill in the art in the country of pending application.

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 101***

5. Claims 21-46 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Specifically, applicant is claiming “a natural ecological structure”. “Natural” is defined as “existing in or formed by nature”, “ecological” is defined as “the branch of biology dealing with relations and interactions between organisms and their environment”, and “structure” is defined as “construction and arrangement of tissues, parts or organs” when in context with ecology. As noted in MPEP 706.03(a), a thing occurring in nature, which is substantially unaltered, is not a “manufacture.”

***Claim Rejections - 35 USC § 102***

6. Claims 21-22, 32, 42-43 and 48 are rejected under 35 U.S.C. 102(b) as being anticipated by Whitaker, *Agricultural Buildings and Structures*, or in the alternative under 35 U.S.C. 103(a) obvious over Whitaker, *Agricultural Buildings and Structures* in view of Placencia, U.S. 5,862,544 and Albers, U.S. Patent 4,008,689, further evidenced by the current state of art of each of zoos, botanical gardens, college campuses, and plantations and farms.

Regarding claim 21:

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Whitaker discloses a multifunctional tridimensional combined ecological architecture having one or more buildings (see Part I starting on p. 3) comprising:

- an ecological structure capable of use for organisms,
- a natural ecological structure,
- a place capable of use for human culture activity,
- an organism production system,
- cooperating systems;

wherein said one or more buildings have a tridimensional ecological structure (A TREE) and includes an aboveground part (see p. 9), an underground part, or both, wherein a top roof, sides wherein the top roof, sides, or both are partly or completely transparent (wherein the sides have windows, windows are inherently transparent, see p. 436), openable and closable, or both;

wherein said natural ecological structure and said ecological structures for organisms are provided anywhere in or on said at least one building, and include plants, organisms, water resource, and human cultural sights therein (see Chapter 21);

the tridimensional ecological structure of one or more buildings comprises a plurality of layers of ecological environment (streams, hills, trees, water cycle, nitrogen cycle), said structure is of a structure formed of opened type, closed type, openable and closable type or combined type (roof, open roof, roof capable of being opened or closed) and has a fixed type of organism cultivation device (a

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pot for a plant or a trellis for vines), said device being vertically developed or horizontally developed, said more buildings comprising ecological structures with aesthetic symbols, hood type, frame hood types, tree frame types, 3d land types, 3d awning types, combined types, turret types, combined passage types, hacienda types, village types, town types, river types, bridge types, road types, wall types and organism cultivation mechanical types;

said organism production systems comprising cultivation devices, processing devices, storing and transferring devices, and marketing devices (see Ch. 21);

said cooperating systems comprising at least a part of a water recycling system (plants inherently perform these functions, furthermore, examiner takes official notice that water recapture and treatment is known to persons of ordinary skill in the art; it would have been obvious to a person of ordinary skill in the art at the time of the invention to use water recycling systems because water delivery and treatment from a central plant uses an excessive amount of energy that causes it to be comparatively inefficient and less economical than water recapture and treatment on location, as taught by Placencia, U.S. Patent 5,862,544), electrical (see Ch. 14), ventilation (see Ch. 16), temperature and humidity regulating (see Ch. 16, p. 295), light transmitting (greenhouses comprised of glass inherently refract light and also allow for light transmission there through), methane (see p. 339 and p. 394, examiner takes official notice that if methane is contained and removed it is obvious to a person of ordinary

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skill in the art to store it in tanks because methane is a source of energy and as such, it is desirable to capture it for use, as taught by Albers, U.S. Patent 4,008,689), illumination and control systems (p. 454).;

said at least one building and systems combined in a manner of **part or complete combination**.

Should applicant argue that Whitaker does not disclose ALL of the elements of the claimed combination, note that the claim recites, "said at least one building and systems combined in a manner of part of complete combination," and Whitaker at the least discloses the combination in part.

Regarding claim 22:

Whitaker discloses claim 21, wherein

said water recycling system comprises a precipitation gathering and purifying device, a sewage water recuperating and classification and purifying device, an external water resource input device, a device capable of filtering and purifying water from air, a sanitation device, a water reservoir device and a water supply device;

said electrical system comprising a power generation and storing device, a power transmission and power supply device, a voltage transformation and power distribution device;

said ventilation system comprising an air input/output device, an oxygen

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supply device, and air purifying and recycling device and a sanitation device;

said temperature and humidity regulation system comprising a temperature regulating device and a humidity regulating device;

said light transmitting system comprising a light refractive device and a light transmitting device;

said methane system comprising a methane tank and a methane storing and utilization device; said control system comprising automatic, manual or both control mechanism for the systems; and

wherein the place able to be used for human culture activity comprises a place able to be used for resting and a place for sports and cultural activities.

Regarding claim 32:

Whitaker discloses claim 21, and further discloses wherein the building is combinable in at least one of various types of forms listed. Refer to the figures throughout Whitaker.

Regarding claims 42 and 48:

Whitaker discloses claim 21, wherein said ecological structure capable of use for organisms and the natural ecological structure comprises at least one of an ecological structure of ecological wall type, and tridimensional warm house structure and wherein the structure comprises a space for organisms and an



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opening and closing device (a roof, a door, a window, ventilation).

Regarding claim 43:

Whitaker discloses claim 21, wherein said place capable of use for human cultural activity comprises a place capable of use for office, commerce, sports, culture, factories, schools, research, storage, sanatorium, stations, and recreation.

It has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations insofar as the prior art apparatus is capable of being used in the manner as stated by the limitations of the claim.

Regarding the limitations directed to **Taiji and Eight Gua graphics**, note that the courts have found that matters relating to ornamentation only, which have no mechanical function, cannot be relied upon to patentably distinguish the claimed invention from the prior art.

### ***Claim Rejections - 35 USC § 103***

7. Claims 23-31, 33-41, and 44-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whitaker, *Agricultural Buildings and Structures*.

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Regarding claims 23-31, 33-41, and 44-46:

Whitaker discloses claims 22 and 32, but does not expressly disclose each and every limitation of the claims regarding the water filtration device, the theft alarm system, the roads and bridges, solar power devices, organisms and the other broad scope of limitations.

However, Examiner takes official notice that it is old and well known to use each of the systems and devices claimed by applicant in both combination and as a stand alone functioning unit. Support for this assertion includes college campuses, farms and plantations which are well known to persons of ordinary skill in the art. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have installed in and around a system of buildings each of these well-known devices and systems.

The motivation to combine each of these systems would have been to form a sustainable location that meets all of a community's needs.

### ***Response to Arguments***

8. Applicant's arguments filed 1/5/2010 have been fully considered but they are not persuasive.

9. Regarding applicant's arguments drawn to the objections of the claims, applicant claims that a person of ordinary skill in the art in Chinese culture would have common knowledge of the expressions, examiner maintains that this does not apply to the ordinary skill in the art of the building trades in the United States of America. Wherein

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the patent is being applied for in the United States, the language of the claims should be understandable to a person of ordinary skill in the art in the country of pending application. Note that educational level or active workers in the field is a factor considered in determining level of ordinary skill in the art (MPEP 2141.03). In the instant case, note that a person of ordinary skill in the art to which the invention pertains would not be familiar with these graphics types.

10. Regarding applicant's arguments drawn to the rejection of the claims in view of Whitaker, applicant argues that Whitaker does not disclose each and every element of the claims. However, Whitaker does disclose each and every element of the claims as addressed in the 35 USC 102(b) rejections above. Examiner has provided, in the alternative, a 35 USC 103(a) rejection for further reinforcement in rejection of the claims.

11. Applicant further makes arguments drawn to the intended use of the spaces of Whitaker. Applicant is reminded that it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations insofar as the prior art apparatus is capable of being used in the manner as stated by the limitations of the claim.

12. Applicant is further reminded that claims in a pending application should be given their **broadest reasonable interpretation**. In the instant case, the invention as claimed is combining various types of buildings, devices, and systems into an ecological architecture. "Architecture" constitutes buildings collectively as defined by the *Random*

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*House Unabridged Dictionary*. As asserted by the rejection of the claims above, both a college campus and a farm teach multifunctional tridimensional (3D) combined ecological architectures (green houses, silos, fields, ALL PRESENT ON COLLEGE CAMPUSES, particularly schools with agricultural programs) having one or more buildings as claimed by applicant.

13. By applicant's own admission, the large scale of complex ecological architecture according to the present invention is a systematic invention. These features are disclosed by Whitaker as well as by the systematic structure of college campuses and farms throughout the world, also in zoos and botanical gardens.

14. Regarding applicant's argument that college campuses, farms and plantations do not meet the limitations of the claims, examiner maintains that the claims are provided the broadest reasonable interpretation and that the limitations with regards to the intended use of the space are met wherein the prior art is capable of performing the task set forth in the language of the claims. Examiner maintains that *Whitaker*, college campuses, farm, and plantations DO teach combining the elements defined in the claims.

15. On pg. 18 of applicant's arguments, applicant contends that "Neither Whitaker nor the traditional campuses and farms recited in the Office Action discloses a building or more buildings in which the ecological structure for organisms, natural ecological structure and places for human culture activity are combined together." Note that a greenhouse, as disclosed in the prior art AND VERY WELL KNOWN TO THE STATE OF THE ART, and a college campus,

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particularly with an agricultural department, include a structure (glass or plastic paneling and windows) for organisms, natural ecological structure (trees) and places capable of being used for human culture activity (i.e. praying, shaking hands, conversing about how well a plant grows under different conditions).

16. Multi functional and tridimensional mean having three dimensions which building have and being able to be used for different functions, also a capability of buildings.

17. Regarding development upwards and downwards, note that buildings do have the aforementioned structure wherein a foundation or a basement are developed downwards from the ground and a roof or multi-stories are developed upwards, as can be found in zoos, botanical gardens, barns, silos, grain warehouses, greenhouses, college classroom buildings, etc.

18. Regarding applicant's argument that natural phenomena is claimed functionally, note that independent claim 21 recites, "comprising: a natural ecological structure." This is a positive recitation of naturally occurring phenomena.

19. Should applicant further argue that the prior art of record does not explicitly disclose all nuances of the claim language's structural limitations, note the following:

a. Non-statutory subject matter is claimed, so anticipatory patent literature is insubstantial.

b. MPEP 2144.03:

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i. Official notice without documentary evidence to support an examiner's conclusion is permissible only in some circumstances. While "official notice" may be relied on, these circumstances should be rare when an application is under final rejection or action under 37 CFR 1.113. **Official notice unsupported by documentary evidence should only be taken by the examiner where the facts asserted to be well-known, or to be common knowledge in the art are capable of instant and unquestionable demonstration as being well-known.** As noted by the court in *In re Ahlert*, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970), the notice of facts beyond the record which may be taken by the examiner must be **"capable of such instant and unquestionable demonstration as to defy dispute"** (citing *In re Knapp Monarch Co.*, 296 F.2d 230, 132 USPQ 6 (CCPA 1961)). In *Ahlert*, the court held that the Board properly took judicial notice that "it is old to adjust intensity of a flame in accordance with the heat requirement." See also *In re Fox*, 471 F.2d 1405, 1407, 176 USPQ 340, 341 (CCPA 1973) (the court took "judicial notice of the fact that tape recorders commonly erase tape automatically when new 'audio information' is recorded on a tape which already has a recording on it"). In appropriate circumstances, it might not be unreasonable to take official notice of the fact that it is desirable to make something faster, cheaper, better, or stronger without the specific support of documentary evidence. **Furthermore, it might not be unreasonable for the examiner in a first Office action to take official notice of facts by asserting that certain limitations in a dependent claim are old and well known expedients in the art without the support of documentary evidence provided the facts so noticed are of notorious character and serve only to "fill in the gaps" which might exist in the evidentiary showing made by the examiner to support a particular ground of rejection.** *In re Zurko*, 258 F.3d 1379, 1385, 59 USPQ2d 1693, 1697 (Fed. Cir. 2001); *Ahlert*, 424 F.2d at 1092, 165 USPQ at 421.

In the instant case, examiner has cited zoos, farms, college campuses, and botanical gardens as old and well known expedients in the art, as the facts so noticed are of notorious character and serve only to "fill the gaps" which might exist in the evidentiary showing made by the examiner to support a particular ground of rejection.

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- c. To adequately traverse such a finding, an applicant must specifically point out the supposed errors in the examiner's action, which would include **stating why the noticed fact is not considered to be common knowledge or well-known in the art.**

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to BRENT W. HERRING whose telephone number is (571)270-3661. The examiner can normally be reached on Monday-Thursday, 8:00AM-5:30PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Dunn can be reached on (571)272-6670. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/B. W. H./  
Examiner, Art Unit 3633

/Robert J Canfield/  
for D. Dunn, SPE of Art Unit 3633